

CLAIMS

1. A detector of a rotation angle and torque, the detector comprising:
 - a firsts gear;
 - 5 a first rotor including a gear engaging with the first gear;
 - a first magnet rigidly mounted to a center of the first rotor;
 - a second gear;
 - a second rotor including a gear engaging with the second gear;
 - a second magnet rigidly mounted to a center of the second rotor;
 - 10 a circuit board disposed between the first rotor and the second rotor;
 - a first magnetism detecting element disposed on a first face of the circuit board at a place confronting the first magnet;
 - a second magnetism detecting element disposed on a second face
 - 15 of the circuit board at a place confronting the second magnet; and
 - a housing accommodating the foregoing structural elements.
2. The detector of claim 1 further comprising:
 - an arm including a bearing which supports the first rotor, and
 - 20 an elastic body which urges the arm,
 - wherein the elastic body urges the arm, so that the first rotor is urged against the first gear.
3. The detector of claim 1 further comprising:
 - 25 an arm including a bearing which supports the second rotor,
 - an elastic body which urges the arm,
 - wherein the elastic body urges the arm, so that the second rotor is

urged against the second gear.

4. The detector of claim 2 or 3, wherein the arm has a thin-based section molded from resin around the bearing.

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5. The detector of claim 2 or 3, wherein the elastic body is molded from resin integrally with the arm.

6. The detector of claim 2 further comprising an arm stopper for
10 limiting a movement of the arm, wherein the arm stopper limits the arm to move within a smaller area than dimensions of an intermeshing between the first gear and the gear of the first rotor.

7. The detector of claim 3 further comprising an arm stopper for
15 limiting a movement of the arm, wherein the arm stopper limits the arm to move within a smaller area than dimensions of an intermeshing between the second gear and the gear of the second rotor.

8. The detector of claim 1, wherein includes a pair of rotation stoppers,
20 and each part of the pair disposed on respective end faces confronting each other of the first gear and the second gear.